Micro-Credit Financing for Rural Energy Services

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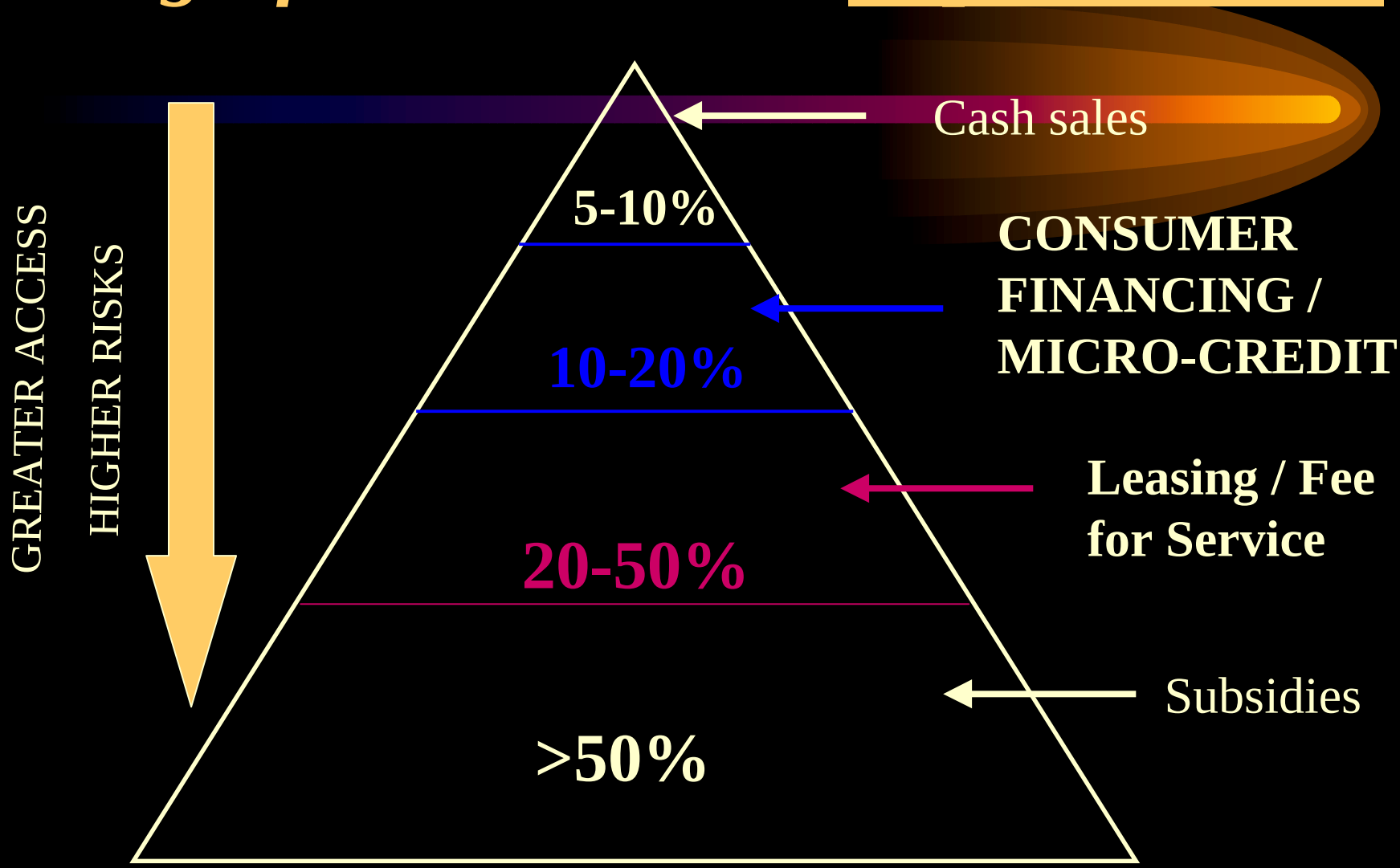
What is Micro-Credit/Finance?

- Small amounts of money loaned to persons who are poor, have no credit history, have little or no assets and don't have access to "normal" banking institutions.
- Generally provided for short-terms and secured by personal or minimal collateral.
- Primarily for working capital requiring repayment in small, frequent intervals.

Why Consider Micro-Credit/Finance Schemes for Renewable Energy?

- Large percentage of rural populations in developing countries have no access to modern energy services.
- Their only options are to rely on renewable energy services which in general are capital intensive.
- Credit is needed to finance their purchase of appropriate renewable energy technologies/services.
- Credit can help meet social development goals while reducing demand on public sector resources.

Significance to RE = Expand Access



Barriers to Micro-Credit/Finance for Renewable Energy Markets

- Risks associated with isolated, rural, poor borrowers -no credit history, no collateral;
- High costs of administering micro-credits;
- Short-term and amounts for micro-credits;
- High interest rates for borrowers;
- Lack of presence of MFIs in isolated rural areas;
- Inconsistent income stream of borrowers; and
- Not necessarily tied to income generation.

Models for Micro-Credit/Finance

- Finance the buyer/end-user who then selects the RE technology and vendor.
- Finance the RE vendor/supplier who in turn provides financing to the buyer.
- Finance the leasing company who in turn leases the RE technology to the end-user.
- Finance a RESCO who in turn provides energy services to the end-user.

Finance the Buyer/End-User

- Positives:
  - Buyer owns the system after financing is paid out;
  - Buyer can select the RE technology and supplier that best meets their needs;
  - Creates competition among RE suppliers.
- Negatives:
  - Multiple small loans with high risks for lenders;
  - Repayments are dependent on end-users cash flow;
  - Constraints on down-payment and term of the loan;
  - High administrative costs for servicing of loans.

Finance the RE Vendor/Supplier

- Positives:
  - Larger borrower who in turn provides the micro-financing for product sales;
  - Repayment of loans depends on reliability of RE products;
  - More capable of providing commercial banks with security for loans; and
  - Easier to appraise by commercial banks for loan eligibility.
- Negatives:
  - Vendors/suppliers do not necessarily want to be MFIs;
  - Security requirements increase cost of finance to RE end-users;
  - Cost of administering the micro-credits increase the ultimate costs of RE products; and
  - Vendors/suppliers not necessarily located in rural areas.

Finance the Leasing Company

- Positives:
  - Larger borrower who in turn provides the micro-financing through leasing of product;
  - Repayment of loans depends on reliability of RE products;
  - Possible for owner to eventually own the RE system;
  - Leverage on costs for large procurements;
  - Able to capture tax benefits from equipment depreciation; and
  - Leasing of equipment is usually principal business.
- Negatives:
  - RE systems are not necessarily principal business;
  - May not provide service and spare parts for RE systems;
  - Repossession of RE systems due to non-payment not easy; and
  - Leasing agents not always present in the rural areas.

Finance a RESCO

- Positives:
  - Larger borrower who in turn provides the necessary energy services to the end-user;
  - No micro-financing … the end-user pays a fee for service;
  - End-user does not bear the responsibilities for operation, maintenance and replacement of spare parts;
  - Leverage on costs for large procurements;
  - Model is similar to the conventional utility.
- Negatives:
  - Costs to end-users may be higher than other options;
  - End-user may not care adequately for RE systems;
  - Initial institutional infrastructure is costly and only effective if there is a critical mass of end-users; and
  - RESCO's may require granting of concessions which can limit competition - problem of monoply.

Examples of Actual Micro-Finance Projects

- Nepal Biogas Support Programme
  - Finance the buyer/end-user:
  - MFI infrastructure existed;
  - Successful in financing over 60,000 household biogas systems to date.
- Sri Lanka ESD Project - SPV Component:
  - Finance the RE vendor/supplier;
  - Vendors/supplier infrastructure not in place;
  - Cost of financing to end-user is high;
  - Project is seriously lagging in meeting targets.

Examples of Actual Micro-Finance Projects (continued)

- IREDA -SPV component:
  - Finance leasing companies;
  - Leasing companies were reluctant to extend leasing/financing arrangements to rural end-users;
  - Model has not been successfully applied on a wide scale.
- Bolivia/CRE - SPV Project:
  - Finance a RESCO;
  - Rural cooperative established an off-grid RESCO;
  - Target of 10,000 solar home systems;
  - Project is progressing on target.

Conclusions

- Micro-credit/finance systems can work;
- Successful models do exists - Nepal, Bangladesh, Dominican Republic, Bolivia, etc .
- Strong institutional framework that is present in the rural areas is necessary;
- Flexibility of micro-credit/finance schemes to account for high capital cost and longer terms for RE systems is necessary;
- Financing from commercial banks to MFI's need to be streamlined to increase availability of funds.